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Address.

ETHER DAY ADDRESS.*

TRADITIONS, STANDARDS, AND PROSPECTS OF THE MASSACHUSETTS GENERAL HOSPITAL.

BY RICHARD C. CABOT, M.D., BOSTON.

OUR celebration of Ether Day this year has something the aspect of a reunion. Those of us who love and serve this hospital have not been together before for three years. But your foreign branch, your foreign representatives, whom you sent to do the foreign part of this hospital's work in France and England, did not forget the anniversary day on which the adherents and friends of this hospital are accustomed to gather up the traditions of their past, to take account of stock, and to ask for such visions of the future as may guide it fruitfully.

We celebrated Ether Day in 1917 at Bordeaux, in 1918 in London. The tradition has not been broken, at least so far as the loyalty and devotion of our leader, Dr. Washburn, could preserve it. He gathered us together in the chilly October of Southern France, in a bare and drafty building, to commemorate as best we could our home and our roots in this old institution at Boston. Again, in October of 1918, he gathered together in London such servants and graduates of the hospital as he could find, at a meeting honored by the presence and by the appreciative remarks of Sir William Osler.

Since the trustees have chosen for the speaker of this afternoon one who has no extensive or accurate knowledge of ether, and who can bring with him the prestige of no special achievements in science performed in another part of the country, but have selected a member of our own family group, it seemed to me proper that the topic for today should be one needing no special fitness on the part of the speaker except knowledge of the hospital and affection for it extending over thirty years.

Just three decades have passed since I first began to be acquainted with the multifarious and incessant activities of the Massachusetts General Hospital. Using my own personal knowledge of these 30 years, and supplementing it by the writings and recollections of others, I wish today to pass in review *the achievements, standards, and prospects of this hospital.* I shall pay special attention to the years since 1871, at which date the official volume narrating the history of this hospital ter-

* Address delivered at the Massachusetts General Hospital, on the seventy-third anniversary of Ether Day, October 16, 1919.

minates. In this survey I shall be guided by the belief that there are three main functions, by success or failure in which any hospital should be judged. It is the business of a hospital:—

a. To apply the best of existing medical and surgical knowledge to the comfort and healing of body and soul.

b. To extend this knowledge through example, teaching and research.

c. To extend our vision and our influence beyond the hospital's walls.

The first two of these purposes comprise what may be called the *domestic policy* of the hospital and the third its *foreign policy.* Medicine like charity begins at home. Our first and foremost duty must be our ward service, the detailed care of such patients as we find day by day in the wards and in the Out-Patient rooms of our hospital. This has been somewhat cynically spoken of as the duty of "maintaining a repair shop." Surely we must maintain a repair shop and an excellent one. The repair of his wounds and ills is what the patient most poignantly desires. But we have never been merely a repair shop. Our attack upon the body's ills has never been merely the mechanical and the chemical attack, for mechanics and chemistry can be applied as well to the body of an automobile as to the body of a man. From the very opening of this hospital, September 3, 1821, when the first patient was received, Dr. James Jackson and Dr. J. C. Warren set a standard for the care of patients which in many respects we cannot hope to excel. They realized from the first that it was unscientific as well as inhuman to ignore the sick mind in the sick body, to forget the one function which integrates and represents all the other functions of our organism. As they ministered day by day to diseased bodies we can imagine these first leaders of our hospital traditions confronted with the pathetic question: "Canst thou minister unto a mind diseased?" In their life and practice the first physicians of this hospital answered "Yes." And they answered so clearly and consistently that their influence, the tradition of Jackson and Warren, has persisted, I believe, even to this day.

In the *Annual Report* for 1867, the precise but uninspired style characteristic of our annual reports rises to true eloquence for once in their hundred years' extent. That was the year of Dr. James Jackson's death, and in the resolutions upon this event the trustees say:

"His personal as well as professional qualities, his activity without imprudence, his decision without dogmatism, his conscientiousness that never provoked, his exhaustless sympathies which made him the father or the brother, as well as the physician, of those to whom he ministered, bearing their troubles as his own and alleviating by the charm of his presence the pains he could not remove by his skill,—his unwearied study, his fruitful knowledge, his contributions to the science and literature of medicine, and his relations to the older and younger members of the profession gave him a position at the hospital as exclusively his own as that which he held in the community."

Since that time our daily ward service has represented, I think, the conscious attempt to continue that tradition unimpaired. To make possible the continuity of this standard it has been necessary that the trustees should consider always the *character* as well as the professional attainments of those appointed to serve in the hospital wards. Men of conscience, of culture, of sympathy and integrity have been constantly appointed upon our staff. The intellectual and moral standards of this staff have been always its most impressive lesson to the long procession of house officers and junior physicians who have passed through this hospital.

Some years ago two very promising young house officers graduated from this institution and settled with brilliant financial prospects, one of them in Cincinnati, the other in Chicago. Within two years each of these men wrote independently to a member of our staff asking if it would not be possible for him to come back here on some terms. They were willing to give up first-rate financial prospects for a bare subsistence in this neighborhood, because their contact with the tradition of Jackson and Warren as passed down to them by such physicians as Dr. Frederick C. Shattuck, Dr. James Minot, Dr. E. C. Cutler, and Dr. John Collins Warren had spoiled them for commercialism in medicine. They had found here certain ethical and intellectual standards taken as a matter of course. I mean the wise man's honest confession of ignorance, the absence of suspicion, secrecy and backbiting, the rule of fair-

ness to others, the habitual thoroughness of examination, record and subsequent study, the habitual courtesy under conditions which tempt us to a bald and mechanical type of intercourse, —all this had sunk into their minds as it has sunk into those of generation after generation of young physicians passing through their period of service in this hospital.

These high standards in the performance of the day's work involve the double ability to *find* interest in what seems monotonous and to *bring* interest into it. The ability to be astonished and to be delighted is one of the most reviving and sustaining characteristics of the tradition passed on by our staff. I shall never forget the enthusiasm, the lighted eye and the kindled accent with which Dr. Frederick C. Shattuck was accustomed when confronted with a fine example of disease, to say, "God bless my soul! Did you ever see anything like that?"

This spirit has been possible because the members of our staff have been accustomed to bring the best of themselves with them to the hospital and not to leave behind them at home, all except their technical equipment. They have brought with them to the hospital not merely their keen intellects and their well-stored memories, but their other human interests. For example, it is recorded that Dr. J. Mason Warren used often to bring his children with him upon his hospital visits, and many of us remember an amazing and mirth-provoking dachshund, which followed Dr. Shattuck about the wards. So Dr. Whittier brought always his still burning memories of the Civil War.

We should be foolish to ignore here the influence of heredity. If medical science has taught us anything it is that *blood tells,* that stock is a fundamental factor in human worth and achievement. Hence, the better members of our staff have passed on the accumulations of a hundred years of strenuous, intelligent and conscientious living, the gleanings of two continents, the fruits of humane culture.

It has never been better exemplified than in this hospital that true greatness is characterized especially by modesty and unpretentiousness, that merit does not have to trumpet its claims by titles or decorations nor to hedge itself around with a wall of aloofness. Our models and teachers in the daily work of the wards have been as ready to learn as to teach, and to learn even from their youngest and crudest assistant.

The tradition that I have tried to describe is, I believe, a genuine and persistent characteristic of our city. Boston is no longer a literary centre, if it ever was; but the practice of humane and skilful service is, I believe, as strong with us at this hospital today as it was a hundred years ago. It is a tradition that holds fast something of the best yet achieved here, thus by conservation making true progress possible. And because many men have built their lives into the structure of this tradition, giving the best they had to offer, the spirit of this tradition is greater than that of any single man, yet has an individuality all its own.

II.

In Tables I and II I have jotted down some of the most important items of our achievement, noting first our material expansion and second some improvements in the quality of our service. We have become better, I think, as well as bigger. But I will speak of our material growth first, though in some cases our growth in size has meant an improvement in quality.

The first twenty years of the hospital's life saw the beginning and expansion of the Bulfinch building, the corner-stone of which was laid July 4, 1818, a centenary which, so far as I know, we did not notice or commemorate last year.

MATERIAL EXPANSION.

The first important additions were the group of buildings comprising the Thayer dormitory for nurses, and those which we ordinarily call the "lower wards," A, B, C, D, E, built during the years of 1874 to 1888 and providing a type of service but meagrely secured in the older building, I mean the advantage of private rooms. In 1896 came the construction of the new pathological laboratory and the power house. With this laboratory we secured one of the most important improvements in the quality of our work, the genius of Dr. James H. Wright as director of the new pathological laboratory. All that now goes on in that busy and diversified structure had to be done till 1896 in a dark and narrow closet which now makes up a small section of the Warren Library, a closet about 10 feet by 6.

Between 1900 and 1903, some of the most important of the buildings now in use were added, including the new operating building, the domestic building, and last but most important, the new Out-Patient building. By these three new structures I think we can say that the daily work of the hospital took on quite a new complexion. I noticed at once an improvement in the patients' diet, resulting from the new kitchen arrangements of the domestic building. The new operating building made possible much better organization and multiplication of the necessary surgical operations, while the new Out-Patient building, the finest of its kind in the world, brought to the notice first of ourselves and later of the rest of the country, the central significance and value of Out-Patient work.

In rapid succession followed the building of the dermatological and orthopedic wards, and not long after, of the new nurses' home. Finally, in 1915 and 1917, came the last and, in some ways, most important additions to our plant, the Moseley Administration Building (1915) and the Philips House (1917).

But this material expansion which enabled us to care for more patients and give them better service, has been still further increased by improvements in organization and in treatment, through which we have cut down the average stay of the individual patient from 11 weeks, as it was in 1855, to 18 days, as it was in 1898, and approximately 17 days, as it is now. This enables us to give greater public service without increasing the size of our expensive urban plant. The plans for a country branch of this hospital now taking shape in the minds of the trustees will enable us to cut the patient's stay in this urban hospital still shorter and so to serve more people.

TABLE I. SOME SIGNIFICANT DATES.

1869	Lady visitors to female patients
1870	Lady visitors to male patients.
1871	Dr. R. H. Fitz, microscopist.
1873	Nurses' Training School organized.
1889	Dr. R. H. Fitz, pathologist. (Appendicitis, 1886.)
1896	Dr. J. H. Wright and Pathological Laboratory.
1903	New Out-Patient Department; also Children's Service and Skin Ward.
1905	Dr. J. H. Pratt and Dr. John B. Hawes aggressively attack T. B.
1905	Social Service.
1907	Dr. F. A. Washburn's Administration begins.
1907	X-ray Department.
1908	First Continuous Service begins (Dr. F. C. Shattuck).
1909	Practitioners' Courses.
1911	Surgical Residents (Paid).
1911	Staff Reorganized—Executive Committee; Dr. D. L. Edsall arrives.
1913	Department of Syphilis (Drs. Abner Post and C. Morton Smith).
1913	Department of Industrial Diseases (Dr. Wade Wright).
1913	Clinic Secretaries.
1913	Medical Resident (Dr. W. W. Palmer).
1913	Out-Patient Department fee raised to 25 cents.
1915	Dr. Washburn proposes consultation clinic for persons of moderate means.
1915	Case records begin to be circulated.
1917	Philips House.
1918	Dr. Edsall organizes research.
1918	Trustees plan hospital for persons of moderate means.

IMPROVEMENTS IN THE QUALITY OF SERVICE.

a. Diversification of Service. It is characteristic of the personal devotion traditional in our profession that the doctor is wont to try to do, himself, everything or nearly everything that needs to be done for the patients. Thus in my uncle Dr. Samuel Cabot's time, when the use of the clinical thermometer was introduced, all temperatures were taken by the physicians themselves. No nurse was allowed to use so delicate an instrument of precision. So until very recently it was thought a heresy akin to scandal to suggest that patients could be admitted to the hospital wards or to the Out-Patient Department by anyone except a physician. Yet this portion of our routine has long since passed over to *nurses.*

In a similar way a considerable portion of our laboratory work has passed into the hands of *paid technicians* assisted by *volunteers,* and fourth-year medical students are now employed as *clinical clerks* a considerable portion of the year to do work previously thought proper only for a graduate physician.

The management and marshalling of patients in the dispensary clinics, which used to be performed by frantic and hasty medical assistants, is now quietly and deftly performed by our volunteer *clinic secretaries.*

In the treatment of patients we have summoned to our aid not merely the nurses who have always done so much of it, but special *therapeutic assistants* in the departments of hydrotherapy, mechanotherapy, massage, and in the dietetic management of diabetes. Cure by occupation is so well established in our wards, owing largely to the devotion of Miss Brackett.

Something of the variety and volume of service now given in this hospital can be seen

from Table II (Persons Serving the Hospital). The volume of service is seen in Table III.

Here I should like merely to note in connection with the therapeutic assistants in the field of hydrotherapy, that this branch of service began in June, 1824, when a cold and warm salt-water bathing house was erected on the seashore, which then directly touched our walls.

TABLE II. PERSONS SERVING THE PATIENTS AT THE MASSACHUSETTS GENERAL HOSPITAL.

Trustees		12
Consultants		12
Committee members		46
Physicians and surgeons		216
Research physicians		9
Nurses		455
Orderlies and maids		77
Technicians		8
Social Service	Paid	24
	Volunteer	61
Clinic secretaries and laboratory volunteers		32
Therapeutic assistants		5
Library staff and O. P. D. records		15
Household staff		112
Engineers, carpenters, gardeners, chauffeurs, etc.		17
Clerical staff		20
TOTAL		1121

TABLE III. POPULATION SERVED BY THE MASSACHUSETTS GENERAL HOSPITAL (1919).*

Ward patients (1917)		6,699
Out-patients, new (1917)		31,104
Out-patient visits (1919)		205,524
Case record subscribers		1,803
Physicians (2 weekly public exercises)		100†
Students	Social work	15‡
	Medical undergraduates	270
	Medical postgraduates	300
	Nurses	224
TOTAL (omitting out-patient visits)		40,515

*Except as noted in first three items. † About. ‡ A week.

CONCENTRATION OF ATTENTION AND ATTACK UPON DISEASES ONE AT A TIME.

In 1905, through the energy and ingenuity of Dr. J. H. Pratt and Dr. John B. Hawes, the hospital assumed a new attitude towards one disease,—tuberculosis, an attitude which, I think, may be characterized as *aggressive*. Instead of waiting passively for disease to present itself at our doors in the persons of individual patients, we began to seek it out in its own lairs with the hope of crushing it altogether. The attack upon *tuberculosis* was followed not long after by an attack upon *syphilis* as a separate disease, and by the organization of our syphilis clinic under Drs. Abner Post and C. Morton Smith. I venture to believe that this clinic has no equal in this or any other country, and that its success is due to the amount of attention and interest concentrated upon a single group of patients whose problems are so much the same that unusual skill can be accumulated in dealing with them.

Following the example of Dr. Pratt's tuberculosis class, Dr. F. G. Brigham organized, five years age, our first class for *diabetics*, which has since been a very useful and instructive feature of our work. During the *poliomyelitis* epidemic this disease was also treated in a clinic by itself. *Hay fever and asthma* are now receiving the advantages of a special clinic, and staff, the advances in our organization corresponding with the advances in our ability to treat these diseases successfully.

The clinic for *industrial diseases* established by Dr. Wade Wright just before the war emphasized two principles: first, that just exemplified, the concentration of attention upon one group of diseases in isolation from the rest, and second our increased awareness of the industrial world and the mischief wrought by it, an awareness shared by the hospital with the rest of society at the present time.

SOCIAL SERVICE.

In 1905 came the organization of social service work, which after a precarious and checkered career has now become an established part not only of this but of all other first-rate hospitals in this country, and has recently taken root, through the efforts of your foreign service branch, in France.

THE CIRCULATION OF OUR CASE RECORDS IN THIS AND OTHER COUNTRIES.

Since 1915 the benefits of some of the knowledge gained in our hospital have been spread to cities and countries very far from our gates. It has always been the policy of this hospital to serve the physicians not connected with its staff, so far as this service was consistent with the best welfare of its patients. But now, by means of published records of our work sent out each week throughout this and other countries, we are enabled to extend our service very much further than was possible before 1915.

The standards of this hospital, its standards of record systems, of physical examination, of pathological examination after death, and of

diagnostic reasoning are thus made of value outside our walls.

TABLE IV. SUBSCRIBERS TO "CASE RECORDS."

United States (Massachusetts 96)	1,491
Canada	65
South America	16
West Indies	11
Canal Zone	2
Hawaii	4
Philippines	6
Europe	18
Asia	11
Africa	2
Australia	101

CLINIC SECRETARIES.

I have already mentioned the advantages in the administration and organization of our Out-Patient clinics that have resulted from the introduction of clinic secretaries. This was primarily the work of Mrs. Roger I. Lee, then Miss Ella Lyman, who was the first to demonstrate to the hospital authorities that a young, well-bred but unskilled girl could accomplish something of signal usefulness in the medical routine of the institution. There is nothing like this, so far as I know, in any other hospital, but doubtless, like the other inventions of this institution, it will be imitated elsewhere.

CONSULTATION CLINIC FOR PERSONS OF MODERATE MEANS.

Just before the war, owing to the progressive attitude and foresight of Dr. F. A. Washburn, the hospital took the radical step of establishing in the Out-Patient Department a clinic at which persons, on the payment of $5.00 were able to get the combined services of the different medical specialties now necessary for a thorough diagnosis and rational treatment of disease. It is becoming increasingly obvious that no single physician is wise enough to furnish all the data necessary for a modern diagnosis. The coöperation of laboratory experts, x-ray experts, specialists in the different fields of medical diagnosis, is often necessary if a common disease such as rheumatism or stomach trouble is to be traced to its causes and properly treated. This clinic for persons of moderate means, unable to pay for the services of all the specialists needed for the proper study of their cases, was an innovation in medical service and pointed the way to another of the most important extensions of policy ever made in the history of this hospital, namely:

The Rounding out of our Hospital Plan and Policy so that we may Serve all Classes.

In their last two reports the trustees of this hospital have taken a step involving, I think, signal foresight and courage. They have resolved to put this hospital as far and as fast as they can at the service not merely of the poor, as it was before the erection of the Phillips House, or of the poor and the rich, as it now is, but of *all* classes, including the numerous persons of moderate means who now receive a most unsatisfactory type of medical service. The poor and the rich can get up-to-date treatment, the great body of those financially intermediate cannot.

THE ORGANIZATION OF RESEARCH UNDER THE DIRECTION OF DR. EDSALL.

I have passed over without mention the brilliant discoveries of Morton, of Henry J. Bigelow, and R. H. Fitz, which brought reputation to this hospital in the earlier years of its existence. It is not likely that the quality of their scientific work will be exceeded in the future. But it may be pointed out that the work of these men resembled in some ways the gains of the earlier Harvard football teams. It was done by bold and brilliant individualists. It was not organized or put into the hands of those whose chief purpose centred here.

The beginning of this new organization of research work is due, like many of the best things that have happened in this hospital of late, to the advent of Dr. David L. Edsall. Hitting the high points in the hospital's history we might say that the tradition of service established by Jackson and Warren, the brilliant discoveries of Morton, Bigelow, and Fitz, and the better organization introduced by Washburn and Edsall represent the peaks of our achievement.

PROSPECTS.

I.

CLOSE COÖPERATION OF TRUSTEES AND STAFF.

What now of the future? One of the best promises of our future growth is contained, in the striking increase in activity and interest manifested by the Board of Trustees in recent years. I say manifested, for what I am speaking of is wholly what the staff is able to see.

Until within recent years the staff has known that the trustees were at the helm, guiding our vessel wisely. But we have seen and known but little of them and their activities. Now we are in constant touch with them and we know that they are carrying out the old tradition of the hospital in their present proposal to appeal for new hospital funds.

This is perfectly in line with our traditions. In 1816, although the foundations of the hospital had not then been laid, the trustees decided to make an appeal in behalf of the institution over which they nominally presided. After issuing letters and circulars they "divided themselves into four committees and abandoning their private affairs for a season they went through the streets day after day soliciting subscriptions from all," and in this way raised $846,000 within a few days. Doubtless we shall soon see committees of our trustees taking to the streets on a similar errand of mercy.

II.

Bringing the Best to Us from Other Cities.

Judging from our path as we look backwards over it, we may hope to continue a reform begun in the medical service and in the department of pathology, namely, the infusion of new blood into the hospital by bringing here the best men obtainable from outside our city. It is not enough for the hospital to do its ward work conscientiously and to organize teaching and research within its walls; *it must also extend its influence and its vision extramurally.* One of the first results of such a vision will be to bring us new blood. Dr. Edsall, ever since his coming, has personified in our executive committee and in all our councils a wide awareness of what is going on in other medical centres of this country. He has never let us fall behind or get left out of any of the important movements towards better service occurring elsewhere.

May we not hope that some arrangement may be made here such as has been made at the Mayo Clinic, whereby our awareness of what is going on in the medical centres of this and other countries may not be left to chance or to the transplantation into our midst of a single enlightening personality like Dr. Edsall? As we recently sent Mrs. Myers, the head of our medical library, on a trip to familiarize herself with the other medical libraries and record rooms of the country, as we recently took advantage of Dr. Paul D. White's journey to England to have him bring back to us the best of knowledge and of new instruments for the study of the heart, so we ought to hope that in some way the hospital will provide for a constant stream of new information from outside our walls.

III.

The Study of Intake.

We have begun at last to study intake. A new and enlightening policy of the trustees now focusses our attention upon the question: "Are we now taking into the hospital such persons as we can best serve?" Hitherto we have been passive in this matter. We have indeed selected among those who came to us, but we have never reached out to inquire whether there were any others who needed us as much as those whom we are now serving, or perhaps more, but who are not aware of our existence or cannot gain admission here. Perhaps we shall soon be bold enough to make this hospital really known as it should be known to those who need it. The word "advertise" is not in line with our traditions, but we must accomplish the same results without the word.

IV.

Medical Organization for the Public Good.

Our recent achievements and plans make it possible to hope that in the future we shall organize medical service for the public's good without any fear of an indignant medical minority. We have seen so much of late of the tyranny of minorities in other fields that I think we are awakened as never before to their dangers. If we serve the community as we should we shall certainly arouse the indignation of some of the less enlightened of our professional brethren. We have done so already and served the public by so doing. We must be prepared to do so again.

V.

Exchange Services and Teachers.

This year for the first time so far as I know in our history a member of the staff of this

hospital has been giving medical instruction in another hospital, the Peter Bent Brigham. This may well enough become a fruitful precedent. Why should we not have exchange professors and exchange hospital services along the lines already laid out in the hospital last referred to? Surely such an exchange would increase our vision, extend our influence outside our walls and bring new life within them.

VI.

HOSPITAL WORK SAMPLES HEALTH CONDITIONS IN THE COMMUNITY.

It seems to me almost inevitable that we shall take more and more part in the life of the community outside our walls. The patients who come to us present a sample of conditions as they exist in the community outside. As a bucket let down into the artesian well or into the ocean brings up from the bottom a sample of what is widely distributed there, so a patient with lead poisoning, with tuberculosis, with a court record, with a truancy record, brings us into touch with conditions which we should not ignore. We can serve the community by assisting the schools, the courts, the industrial plants, and the public health authorities to quell the diseases of which we see samples in our Out-Patient clinics or in our wards.

VII.

END RESULTS.

We still know far too little about the progress of our patients after they leave our wards. The rebukes and warnings of Dr. E. A. Codman in relation to our ignorance of our end results are for the most part deserved. From the point of view of science as well as of humanity, in order that we may improve our prognosis and our treatment, we ought to know more of our results. This will cost money and time, but without it we shall not be keeping up with our traditions.

VIII.

THERAPEUTIC RESEARCH.

I cannot but hope that the organization of research under the leadership of Dr. Edsall will result in making the general plan and trend of American medical research less one-sided. We have had a tremendous amount of investigation into the causes and nature of disease. We needed it all and more. But surely we should balance it by more investigation of prognosis and therapeutics. Investigation into the treatment of disease languishes in this country. Who can undertake it better than the research group now developed at this hospital under the leadership of Dr. Edsall?

IX.

UNIVERSITY CONNECTION.

Can we not unite ourselves with some of the academic departments of Harvard University, both for their benefit and ours? The departments of sociology and psychology, of physics and chemistry surely have something to give us and something to learn from us. Are we not neglecting some of the opportunities presented by our closeness to this great university?

X.

BETTER CARE OF CONVALESCENTS.

The trustees' plan for a country branch and the present concentration of *interest in convalescence* through (a) occupational therapy, (b) physical therapeutics, and (c) the special interest of Dr. John Bryant, leads me to hope that we shall take the lead in solving the largely neglected problems of convalescence. It is unfortunately true that in our ward work we lose some of our interest in the patient when he begins to convalesce. This means a loss of efficiency in the institution as well as an injustice to the patient. The convalescence of our patients might be shorter as well as more complete if we put more energy and more attention upon it.

I have passed in rapid and sketchy review what seems to me most important in the standards, achievements, and prospects of this hospital. As we grow in size and in numbers shall we be able to keep the Jackson-Warren spirit? Or as we develop into a huge and diversified industry shall we become as mechanical and as soulless as a factory?

We shall avoid it, I think, by the organiza-

tion of a small, relatively independent units within the hospital. The homelike and humane spirit of a small institution such as this hospital was in the first half century of its existence, can be kept, I hope and believe, if we can organize the different parts of the institution into relatively self-sufficient units in each of which the advantages of smallness and intimacy can be preserved.

Shall we be able to conserve what is best in our traditions and yet to grow with our time?

I believe so, because we shall take the best of what is new from outside our walls and domesticate it here, as we have domesticated Dr. James H. Wright and Dr. Edsall, and always aware that because we have done good work in the past we all the more need reforming. I believe we have never done work as good as we are now doing, and yet I trust that we shall never in future do work as poor.

Shall we be able to keep in organic unity the three proper activities of a hospital?

I believe that we shall not lose the tradition of a high standard of daily work because we shall never lose our connection with humane culture, maintained through the interest and visits of our trustees, of our lady visitors, and of our volunteers. I believe that we shall not lose the spirit of scientific research because we shall realize that only by teaching and research, only by ever closer connection with academic institutions can we free ourselves from the evils of routine and of stagnation. Science is the foe of stagnation. "I read," said Thomas Arnold, "*enough to keep my mind in the state of a running stream;* for it is ill drinking out of a pond whose stock of water is merely the remains of the long past rains of the winter and spring, evaporating and diminishing with every successive day of drought."

We shall keep the scientific spirit, the spirit of the running stream because it is necessary to avoid stagnation in our routine ward work.

We shall keep our influence and our vision upon the world outside our walls through the establishment of exchange services and exchange professorships, through the initiative of our social service department and through the cosmopolitanism of the best members of our staff.

Original Article.

THE SPECIFIC TREATMENT OF HAY FEVER.

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[From the Anaphylaxis Clinic of the Massachusetts General Hospital.]

The treatment of hay fever by means of repeated injections of the specific pollen which causes it is, in these times, a well established therapeutic procedure, yielding results which are on the whole very satisfactory. These results are, however, often irregular and by no means perfect. The purpose of the present work is not only to detail the results of treatment in ninety-one cases of hay fever, but also by studying the irregularity in the results to try to throw light on the mechanism of the disease.

CLINICAL MATERIAL.

This report is limited to the study of cases of ragweed hay fever. The typical patient has violent sneezing, copious nasal discharge, red, running eyes, a peculiar irritation at the root of the nose, sleepless nights, and is often definitely incapacitated for work—in other words, has "hay fever," which begins on some definite day, in New England, usually about August 15, and lasts until the time of the first frost, usually about October first. During the rest of the year, the patient is perfectly well. Such a history is so typical, that in itself it is usually quite sufficient not only for the diagnosis of hay fever in general, but for the exact diagnosis, in this locality at least, of ragweed hay fever in particular.

This typical patient will give a skin test when the extract of ragweed pollen is dropped into his conjunctival sac, rubbed or scratched into his skin, or injected between the layers of his skin. Successive doses of this same extract given before and during the ragweed season, will usually relieve the symptoms as will be discussed later.

The 91 cases in this study have been followed not only through the hay fever season but each of them has, after an interval of at least four weeks following the normal end of the ragweed season, been either seen personally or has answered a letter of inquiry so that the results

of treatment as a whole have in this way been checked up by a retrospect of the entire hay fever season.

Nineteen cases, although treated with equal care, have not been included in this report, because the final result, as noted in retrospect, has not been known to the writer.

RAGWEED EXTRACT.

The material used in diagnosis and treatment consists of an extract of ragweed made as follows:

1.0 gram of ragweed pollen separated by means of carbon tetrachloride from the dried ragweed flowers (according to the method of Wodehouse[1]) was added to 100 c.c. of salt solution containing n/200 sodium hydrate and 0.5 c.c. carbolic acid. The suspension was allowed to stand for three days with occasional shaking, after which it was filtered first through paper to a water-clear, amber colored fluid and finally through a Berkefeld-N filter. This filtrate was found to be sterile and a total nitrogen determination by the Kjeldahl method gave approximately 0.2 mgm. of nitrogen per c.c. Subsequent extractions of pollen with this same technic invariably gave approximately the same nitrogen figures, so that a 1-100 solution of pollen in this diluent contains 0.2 mgm. of nitrogen per cubic centimeter.

No attempt was made in this work to provide fresh extracts of pollen. The stock solutions (1-100) were kept on ice, sealed with paraffine and from them samples were taken as needed and diluted. Such samples did not sediment out or otherwise change in appearance even when kept at room temperature for over two months. Their potency did not diminish nor was there any evidence that their toxicity increased.

In testing these patients, the intradermal method has been used almost exclusively, the original extract being diluted one to ten to make pure pollen 1-1000, which is equivalent to 0.02 mgs. N per c.c. The tests were controlled in each case not only with a similar injection of carbolized salt solution and an injection of some other pollen extract as, for example, red top or timothy, but were also controlled by injections of a horse hair extract in order to demonstrate that the reaction is specific and to determine whether the sensitization is single or multiple. Golden rod extract was not used as a routine. All these protein extracts were diluted so as to contain the same amount of total nitrogen per cubic centimeter. It may be noted in passing that a similar intradermal test using the 1-100 strength was invariably negative in all normal, non-sensitive individuals.

THE METHOD OF TREATMENT.

For treatment patients were urged to present themselves six weeks before the usual onset of their hay fever. The first dose was almost always set empirically at 0.05 c.c. of the weak (1-1000) dilution. If the skin test (always made by injecting 0.02 c.c.) gave a large reaction, no further treatment was given on that day. Succeeding doses at about five- to seven-day intervals were in each case determined according to the amount of local reaction following the previous injection. If this was slight so that the local swelling did not exceed 1-2 cm. in circumference, the succeeding dose was doubled and often trebled. The doses were continued at least a week after the usual onset of hay fever and in a few cases were continued even until September first or later.

It is obvious that many factors come into play influencing the successful treatment of the individual case. No two cases of hay fever are exactly alike; their symptoms, their age at onset, the duration of the disease, the family history of hypersensitiveness as manifested by asthma, hay fever, urticaria, etc., are always variable. The skin tests are variable. While all these patients gave a typical urticarial wheal with its irregular outline, sharply defined margins, and surrounding zone of erythema, there were many individual differences. The reaction appears in one case within two minutes, in another case not for ten minutes; in one case the wheal measures fifteen millimeters in diameter, in another perhaps sixty.

The family history was investigated in a total of 91 patients and was found positive in only 23 (25.2%) which is less than half the figure given by Cooke[2] and also by Rackemann[3] in his cases of extrinsic asthma.

The technic of treatment comprises not only the date of the first dose but the number and frequency of treatments, the size of each dose and the total duration of the treatment.

All these features will be discussed at some length later but first of all the total results will be presented.

RESULTS.

Out of 91 patients, eight (or 8.9) were entirely relieved and had no symptoms of hay fever; 37 (40.6%) were greatly relieved; 20 (22.0%) showed considerable improvement; so that 65 (71.5%) were definitely improved. Fourteen patients (15.4%) showed some relief, while 12 (13.1%) had absolutely no relief or were even worse.

These figures compare favorably with the results obtained by other writers. For example:

Clowes[1] reports that 25-30% show a marked alleviation of symptoms and a further 30-40% show a marked improvement, while the rest are unaffected. He uses a watery extract of pollen which has first been dehydrated with acetone and ether.

Cooke and Vander Veer,[5] using an extract much like the author's, report that of 251 patients treated for late (ragweed) hay fever in 1915, in 16.3% of their cases, hay fever was absent or insignificant; in 43.8%, it was greatly diminished; in 15.5%, it was slightly diminished, while it was as bad as usual in only 4%.

Koessler[6], using a pollen extract purified by alcohol precipitation and subsequent resolution in saline, treated 37 cases of fall hay fever with these results:

Markedly free, 29 cases (78.4%)
Not improved, 8 cases (21.6%)

Solomon, Strauss, and Frank[7], in a review of 241 cases of all kinds of hay fever treated with pollen extracts and reported prior to 1916, say that 45 (18.6%) were entirely relieved, 157 (65.1%) were somewhat relieved and 38 (15.6%) not changed.

TECHNIC.

In the present series, treatment was begun in 51 of the 91 cases during the first two weeks in July. Of these 51 patients 5 (or 9.8%) were entirely relieved, while another 34 (or 68%) were very much improved. Of the 40 patients whose treatment began after July 15, only 3 (or 7.5%) were entirely relieved and 24 (or 60%) were improved. In only 8 cases was treatment begun after the onset of symptoms.

Doses were given at five- to seven-day intervals and although a few patients received many more doses than these, the average number was three to four doses of 1-1000 and four to five doses of 1-100. Throughout this work only these two dilutions were used, as it was felt that in order to measure the ragweed protein, quantities of nitrogen were more important than quantities of weaker or stronger solutions. By means of the pipette syringes (described by Terry[8]) very small amounts of total fluid could be given with considerable accuracy. The total dosage, as expressed in cubic centimeters of the 1-100 strength, averaged about 1.5 c.c., varying from the minute quantity of 0.005 to the relatively large dose of 3.624. The late cases —treated during symptoms, eight in number,— are of sufficient interest to warrant the inclusion of the summary of their treatment.

It is interesting that two of them were completely relieved of symptoms although in four others the results were hardly satisfactory.

TABLE I.

EIGHT CASES WHO BEGAN TREATMENT AFTER AUGUST 25.

NAME	DATE FIRST DOSE	NO. OF DOSES 1-1000	NO. OF DOSES 1-100	LAST DOSE	DATE LAST DOSE	TOTAL DOSE	SUMMARY
F. W. R	Aug. 28	4	0	0.10 (weak)	Sept. 11	0.060	++++
J. Q.	Aug. 28	4	3	0.30	Sept. 15	0.620	+
J. C. C.	Aug. 29	3	5	0.80	Sept. 25	1.085	++++
F. P. A.	Sept. 2	2	2	0.25	Sept. 11	0.325	+
C. A.	Sept. 2	4	1	0.05	Sept. 15	0.100	0
J. O.	Sept. 2	3	3	0.20	Sept. 23	0.485	++
A. K. B.	Sept. 4	2	0	0.10 (weak)	Sept. 11	0.015	+
C. H.	Sept. 4	3	2	0.10	Sept. 18	0.175	++

++++ = Entirely relieved ++ = Considerable relief
+++ = Great relief + = Some relief
0 = No relief or worse.

The relation of the final results to the number of previous years of treatment is shown by Table II. It is seen that in this particular series (far too small for an accurate analysis) there was no significant variation according to the amount of previous treatment.

TABLE II.

RELATION OF FINAL RESULTS TO NUMBER OF YEARS' TREATMENT.

	TOTAL	++++[1]	+++	++	+	0	?
Treated this year only	49	5	12	7	8	5	12
Treated 1 yr. before	35	1	12	8	3	3	8
Treated 2 yrs. before	18	0	9	4	2	1	2
Treated 3 yrs. before	3	1			2		
Treated 4 yrs. before	3		1				2
Treated 5 yrs. before	1		1				
Treated 7 yrs. before	1	1					
TOTAL	110	8	35	19	15	9	24

[1] See under Table I for symbols.

In this study the relation of the final result to the total dosage:—to the sum of all the individual doses added together and expressed in cubic centimeters of the 1-100 dilution—is very interesting. The results are summarized in Table III.

TABLE III.

THE RELATION OF THE TOTAL DOSE TO FINAL RESULT.

TOTAL DOSE AS EXPRESSED IN CUBIC CENTIMETERS OF 1-100 DILUTION.	++++	+++	++	+	0
Under 0.4 c.c.	1	2	3	4	2
0.41 c.c. to 0.60 c.c.		2	1	4	1
0.61 c.c. to 0.80 c.c.	2	1		2	
0.81 c.c. to 1.00 c.c.	2	3	1		
1.01 c.c. to 1.20 c.c.	1	3	1	1	
1.21 c.c. to 1.50 c.c.		7	1	1	2
1.51 c.c. to 2.00 c.c.	1	8	7	1	2
2.01 c.c. to 2.50 c.c.		3	2	1	2
Above 2.50 c.c.	1	10	2	1	2

Figures represent the number of patients.

[1] See under Table I for symbols.

It is curious, especially in its bearing on the immunology of hay fever, that patients with the largest dosage were not the patients who did the best. Of the eight patients who were entirely relieved of their hay fever, five of them were given a total dose throughout the season of not over 1.0 c.c. of the 1-100 dilution, or 0.2 mgms. of nitrogen. Furthermore, out of 11 patients who received absolutely no benefit from the treatment, eight received a total dose greater than 1.2 c.c. On the whole, doses between 0.6 c.c. and 1.5 c.c. seemed to be the most successful. This observation, if true, is, of course, important in its bearing on the mechanism and immunology of hay fever.

The relation of the end results to the dates of first treatments; to the intervals between treatments; and finally to the dates of final treatments are, in this series, not clear cut and are not worthy of tabulation. In general terms, however, there is little question but that those patients did better whose treatment was prolonged well into the ragweed season. The theoretically automatic maintenance of desensitization by the absorption of pollen through the mucous membranes is not here entirely justified by experience. Several patients whose anteseason treatment led to their ultimate tolerance for large subcutaneous doses (1 c.c. of 1-100) of ragweed extract, had hay fever symptoms afterward which were promptly relieved by one or two small doses (0.1 c.c. of 1-1000).

REACTIONS.

Very important features of this study are the general systemic reactions which may follow immediately any injection of a specific protein into individuals susceptible to that protein. Of 91 patients who were each given an average of about eight injections, in other words, a total of 728 injections, there were systemic reactions, noticed by both patient and doctor, occurring in 14 instances in seven patients. It is perhaps worth while to consider these patients in some detail, not only from the point of view of the cause of the reaction, but also from that of the ultimate effect upon the disease. The cases with reactions are therefore summarized here below:

The first patient (H. R.) was a woman of 21, who had had hay fever for only two seasons. She had had four doses of the dilute solution and two doses of the stronger solution, the last being 0.15 c.c. In order to compensate for her vacation, it was decided to give her several doses at shorter intervals. Consequently in three days after the dose of 0.15 c.c. of 1-100 on August 26, she was given twice this dose. This caused, within half an hour, a mild attack of asthma, with severe hay fever and considerable redness around her face and neck. Five days later she was given 0.4 c.c. and again had a reaction. It was hoped that the first reaction had rendered her "anti-anaphylactic." About 18 days after the first reaction, she (having returned from her vacation) was given 0.05 c.c. (only one-third of the dose causing the first reaction) and again she had a mild reaction. It seems likely that the reactions were due to excessive doses and that during the two weeks' vacation she had become again violently sensitive. Her letter in November reports "only slight improvement" and her rating was put down as (+).

The second patient (J. J.), a woman of 39, had had hay fever for 16 years. She had received seven doses of the dilute ragweed extract and one dose of the strong (0.05 c.c.). A week later this last dose was doubled and she had a reaction. Four days afterwards, 0.1 c.c. was repeated and again she had a reaction. In two weeks she was given 0.15 c.c., and had a reaction; a week after that only 0.05 c.c., but still she had a mild reaction. In no case was her reaction severe. Her letter reports, "Hay fever was better than in other years," but she is rated as only (+).

The third patient (C. H.) was a woman of 30, who had had hay fever, rose cold, asthma, together with susceptibility to eggs and horses, since the age of eight. Her treatment progressed without incident until on August 12 she was given 0.05 c.c. of the strong ragweed (1-100). Her previous dose, on August 5, had been 0.6 c.c. of the 1-1000, so that she received in the treatment a dose less—in terms of total nitrogen—than the week previously. Her reaction was very slight and did not come on until about an hour after treatment. After this she took doses of the strong (1-100) dilution at four-day intervals leading up to 0.4 c.c. with no trouble. Four days after this dose of 0.4 c.c., she had 0.5 c.c., which caused a definite reaction with asthma and urticaria appearing in about half an hour. Her letter in November reports, "Asthma was not bad; the contrast with last September is blessedly great." She was rated as (+++).

The fourth patient (A. J. M.) a woman of thirty, had had hay fever since the age of ten. Having had three doses of the dilute ragweed extract, she was given, on August first, 0.05 c.c. of the 1-100 strength. This, in terms of nitrogen content, was twice the dose which she had received the week previously. Four days after this dose, she was given 0.15 c.c. and had a definite reaction. Further treatment was uneventful although the doses were never increased above 0.15 c.c. She is rated (+++).

The fifth patient (F. W. R.), a woman of 53, had had hay fever since the age of 20. She did not present herself for treatment until August 28, at which time she had been having hay fever for nearly two weeks. She was given on this day 0.05 c.c. of the 1-1000 dilution and a week later she was given 0.20 c.c. Four days after this second dose, she was given 0.25 c.c. and in about half an hour had a severe aggravation of her hay fever with slight urticaria and a very transient and mild attack of asthma. The reaction in her case is very interesting because of the very slight increase in dosage which was given four days after the previous dose. She is also interesting in that after recovery from this reaction, she had no further hay fever and thus, in her case, treatment begun in the presence of symptoms was of the greatest success (except for the slight reaction) and she was rated as (++++).

The sixth case (J. C. P.), a man of 48, had had hay fever for twenty years with treatment for four years, always with excellent results. He tolerated ragweed extract very well and on July 31 received 0.3 c.c. of the 1-100 dilution —his fifth dose—without any symptoms and with very slight, transient, local reactions in his arm. Nine days later he was given 1.00 c.c. of the same strength and in fifteen minutes had a severe attack of general urticaria and asthma which lasted for over an hour, being relieved and abbreviated by a subcutaneous dose of adrenalin. The final dose in this case was slightly more than three times the dose given nine days previously, but the dose had been trebled on two occasions before that with about the same time interval and without any symptoms. As in previous years the total result of treatment was good and he was rated as (+++).

The seventh patient (E. E.), a woman of 27, had had hay fever since the age of 12. Her treatment was begun on July 11 and, on her own assurance that she could take large doses, she was given 0.05 c.c. of the strong (1-100) dilution of ragweed. She at once had a reaction which lasted for two hours, although the symptoms were never of great severity. This same patient was then treated with much smaller doses until, on August 12, she was given another dose of 0.05 c.c. of 1-1000, which she took without any symptoms. On August 15, the previous local reaction having been very slight, she was given 0.2 c.c. of the strong dilution and again had a reaction which, this time, was of somewhat greater severity, although of shorter duration. Treatment in her case was very unsatisfactory and seemed in no way to modify her symptoms in spite of the fact that the doses were later reduced to 0.25 c.c. of the 1-1000. She is rated as a failure (0).

In this series reactions incidental to the treatment of hay fever occurred in 14 instances in 728 injections, or 1.9%. Most of the reactions seemed to follow a rapid increase in the dose after a relatively short interval. However, this was not always the case, as in several instances reactions followed only a comparatively slight increase in the dose. The fact that a second reaction can occur within a four-day period following the original reaction demonstrates well the fact mentioned in a previous paper[9] that the well-known principles of anti-anaphylaxis, as seen typically in guinea-pigs, do not hold good in man. This brings us to a discussion of the mechanism of hay fever and of the treatment.

DISCUSSION.

In considering the mechanism of hay fever, three facts present themselves:

First. Ragweed pollen produces an immediate local reaction when in contact with skin and mucous membrane of hay fever patients.

Second. Subcutaneous injections of an extract of this same pollen may produce severe symptoms typical of anaphylaxis which appear in a matter of minutes.

Third. Treatment with ragweed extract causes, in most cases, a relief of symptoms.

These same three facts hold good for diphtheria toxin in individuals who have no antitoxin, but there are these differences:

The local reaction (Schick test) is not immediate but appears only after several hours.

The symptoms caused by an overdose (in animals) are not the same as the symptoms of anaphylaxis.

Treatment with toxin results in the formation of antitoxin and consequent immunity (although perhaps only temporary immunity).

An antitoxin to ragweed pollen (toxin) was claimed to exist by Dunbar,[10] but his "pollantin" has since been shown to have no greater therapeutic effect than normal serum.

In preliminary experiments the author failed to demonstrate antitoxin for ragweed pollen in the blood serum of patients who were "doing well," who were "doing badly," who had recently (one hour) had a reaction or in normal individuals. The method used was to mix a relatively large amount of either fresh or inactivated serum with a relatively small amount of ragweed pollen in a test tube which was then incubated at 36° C. for one hour. Dilutions of the mixture were made with saline and tested for ragweed extract in the skin of susceptible patients. In no case did the treatment of ragweed extract with hay fever or normal serum delay or prevent the development of an intradermal reaction quite as large as the control injection containing the same dilution and amount of ragweed extract but without serum.

The mechanism of hay fever bears a close relation to the mechanism of artificial active anaphylaxis: Local and general reactions are common to each, and proper treatment with the antigen will abolish sensitiveness and bring about anti-anaphylaxis as originally shown by Besredka.[11] In active anaphylaxis, however, the presence of circulating antibodies is one of the striking features, whereas in ragweed hay fever the presence of circulating antibodies is vague and doubtful. Although they may be present in certain cases, they are by no means constant. Indeed Koessler[12] and also Clowes[13] find that circulating antibodies decrease rather than increase as the process of "immunity" progresses.

Although search of the literature has failed to yield other evidence than reactions of skin and mucous membranes, we may assume that there is some substance in the cells of these individuals which either combines with the pollen extract to form a poison in the sense of Vaughan's specific ferment or which by its absence fails to render the poison of the pollen harmless. Thus, from our present knowledge, it seems likely that the whole process is a strictly cellular affair.

The systemic reactions obtained in treatment show that the tolerance or immunity is low; that as suggested by Dr. Goodale,[14] the total capacity of the body for ragweed pollen extract is nearly filled and can easily be made to overflow.

Inasmuch as the active sensitization of guinea pigs to ragweed pollen extract is apparently impossible (Cooke, Flood, and Coca)[15]: as attempts to transfer antibodies from man to animals as well as the demonstration of circulating antibodies to ragweed in a test tube is at best very variable, and as the principles of anti-anaphylaxis do not apply, it seems hardly correct to class hay fever with the typical anaphylaxis seen in the artificial sensitization of animals and man.

Idiosyncrasy to drugs, such as quinine[16] and aspirin, is recognized and, as Cooke[17] indirectly suggests, hay fever as a manifestation of a similar idiosyncrasy to ragweed may belong in this group and have nothing to do with anaphylaxis.

SUMMARY.

First, the results of treating ninety-one cases of fall (ragweed) hay fever are as follows:

Nearly 9% of patients are entirely freed of their symptoms; another 62% are considerably relieved. Of the remaining 28%, about one-

third showed no relief at all. These results were determined by a personal communication to each patient four to six weeks after the ragweed season. Because this final report was unobtained, nineteen other cases are not included here.

Second, the best results are apparently obtained with a moderate amount of specific treatment since in these cases even after considerable preparation the tolerance for ragweed pollen extract still remains at a very low level.

Third, systemic reactions occur after 2% of individual injections and are not always due to an overdose.

Fourth, in view of the fact that so few of the postulates of experimental anaphylaxis hold good for hay fever, it is probable that hay fever depends upon a mechanism which is not "anaphylactic" but which is perhaps closely associated with that of drug idiosyncrasies.

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Clinical Department.

A CASE OF TUMOR OF THE SACRUM.

BY JOEL E. GOLDTHWAIT, M.D., BOSTON.

THE two cases of sacral tumors reported by Dr. F. B. Lund in the December 18, 1919, number of the BOSTON MEDICAL AND SURGICAL JOURNAL, suggest the report of the following case as contributing something to the knowledge of such conditions.

The patient, a married woman, 44 years of age, was referred to me in November, 1909, by Dr. Maurice H. Richardson who sent with her a letter, an extract of which is here printed.

"She was operated upon by a friend of mine, Dr. Giles, of Hanover, N. H. Dr. Giles some years ago did a ventral fixation. It was thought at that time that she had some malignant disease of the liver. I studied her case carefully and then operated, finding that the ventral fixation had become separated and that there were gall-stones. I removed the gall-stones and fixed up the uterus. In the hollow of the sacrum there was a mass which I supposed to be inflammatory before operation. Inside the abdomen I found a firm mass connected with the sacrum, sessile, broad and evidently containing fluid. We thought at the time that this might be due to caries of the sacrum. She has done very well indeed since the operation. She is the picture of health. The mass in the hollow of the sacrum is distinctly smaller but on the posterior surface of the sacrum there is, as you will see, a prominence which confirms the diagnosis of caries of a benign origin."

The patient was referred because of weakness and pain with swelling over the sacral region. At that time she gave the history not only of the operations reported in Dr. Richardson's note, but that she had a very difficult childbirth nine years before, following which there was marked increase in the weakness of the back which had been present before but which had been distinctly weaker ever since.

At the time of my first examination there was a marked prominence of the upper part of the sacrum, giving the impression at first of a distinct spondylolisthesis, but on more careful investigation it was evident that the whole spine had not been displaced forward as it is in a spondylolisthesis, but that much of the appearance which this suggested was due to the swelling over the sacrum with, at the same time, considerable forward inclination of the pelvis. The spinal motions were moderately limited but not more than would be expected as a part of the slight strain which must result from the imperfect posture. The

straight leg raising was moderately limited, suggesting a moderate strain of the sacro-iliac joints, as would also be expected from the forward inclination of the pelvis. There was no evidence of paralysis or involvement in any way of the nerve roots or trunks supplying the region below the site of the tumor. Examination by rectum at that time showed a hard mass covering the whole anterior part of the sacrum and projecting an inch to an inch and a half into the pelvis. The swelling over the posterior part of the sacrum was not hard and did not obscure the general bony landmarks. At that time an x-ray was taken which showed the destruction of a large part of the central portion of the sacrum. In the light of the history of an evidently long continued condition with such extremely good general function, it being possible for the patient to be able to walk about with apparent ease, it was considered inadvisable to operate, and a support for the pelvis was planned to relieve the joints of the pelvis from the strain, and planned also to correct the unnatural forward inclination of the pelvis. This support was applied.

FIG. 1.

The patient has been seen at irregular intervals since, the last note having been made on March 28, 1917, just before I left for service overseas. In that time, the patient had been able all of the time to carry on a drug store business in her town, she being a widow and the support of the family dependent on her. She tired more easily than would be normal but with two or three short periods of rest in the course of a day together with a belt to give reasonable support about the pelvis and low back, it has been possible for her to keep about with apparently no increase of the difficulty and on the whole increasing general strength.

The x-ray shown here was taken in January of 1916 and of itself would naturally cause much greater alarm regarding the patient's well being than would be justified from the functional usefulness which is present.

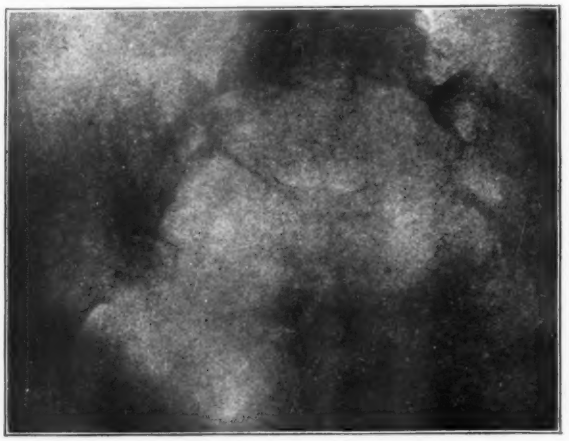

FIG. 2.

The case is reported simply to show that tumors of the sacrum many times are relatively benign and with conservative treatment it is possible for the patients to be reasonably relieved without subjecting them to the risk of operation.

Book Review.

Principles and Practise of Roentgenological Technique. By I. SETH HIRSCH, M.D., Director X-ray Departments, Bellevue, Fordham, Harlem, and Gouverneur Hospitals, New York City. New York: American X-Ray Publishing Co. 1920.

A book on technique written by so distinguished an author as Dr. Hirsch deserves more than passing interest. In this work the profession gains the benefit of the broad experience of a large hospital clinic. The first part of the book is devoted to laying the foundation for proper technique by a detailed explanation of the physics of the X-ray. Although this part of the work is thorough, the writer has been successful in avoiding ultra-scientific terminology, with the result that it is unusually readable and, therefore, instructive. The chapter devoted to standard positions is unique in that the text is illustrated by photographs both of the position and the resulting x-ray appearance. The fact that there are nearly one hundred more illustrations than pages in the book is a point to be commended. Throughout the work there is a wealth of practical information that would require much time to obtain from other sources. For example, the chapter on developing contains, besides the actual technique, a number of practical points not usually included in a book of this kind. The chapter on exposure is particularly complete, giving tables covering practically all possible variations of spark gap, milliamperage, distance, and thickness of the part to be radiographed.

Although in the preface the author has stated his aim—"to pack the kit of the student of roentgenology with those principles of technique which will serve him best on the difficult road to the goal—roentgenological diagnosis and therapy"—he has succeeded also in producing a work that will be a useful reference book for any practitioner of roentgenology.

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ECONOMY IN PUBLIC HEALTH ADMINISTRATION.

THE American people want good health and are willing to pay for it but they should demand that they get a just return for the money expended for this purpose. The increasing popularity of the health campaign has brought with it a host of agencies which are eager to do their part. On the surface this looks very well but a more careful study of the situation shows much lack of coöperation and frequently much duplication. There is also wastage of funds in unnecessary overhead charges. This exists in the national government as well as the state governments and the administration of the smaller political units.

The national government maintains three medical services, each one grasping for the popular public health administration. The Army for some unknown reason still administers the sanitation of the Canal Zone, while the Navy does the same for the Virgin Islands, and the Public Health Service is continually reaching out for fresh fields. Each of these services maintains a medical school in the city of Washington to which is attached in each case an elaborate laboratory and library.

The principles of preventive medicine are the same no matter what uniform the person has on, but there are probably some points of administration and possibly a few special features that are confined to one service and are not of value in the others. These could easily be provided for without the maintenance of three schools. The best interests of the people demand that there be a combination or consolidation of the laboratories and the medical schools of the three services. The time will come when there will be an actual consolidation of the three services.

These are not the only federal agencies that are working in the health campaign. We find that for some unknown reason there is in the Department of Labor a Children's Bureau, which deals entirely with child hygiene. At the same time the Department of Education is also running a child hygiene bureau which to the outsider seems to be run in opposition to the Children's Bureau.

The Department of Agriculture and the Bureau of Mines are also engaged in public health activities.

The conditions among the states are similar to what is found in the national government. Probably most of the state agencies are doing good work, but without coördination and proper direction the maximum of efficiency is not secured.

One of the large eastern states has gone to the limit in inefficient health organization. This state has a well organized health department which is administered by a man of great ability who has a world-wide reputation. In addition we find that the State Department of Education is supervising the medical inspection of the school children, which is distinctly a

health matter. Incidentally it would seem to him who has to do business with the Chief Medical Inspector that he is very jealous of the State Department of Health. The Industrial Commission has supervision of all matters relating to the sanitation of factories and mercantile establishments. These are purely health matters which should be administered by the Department of Health. The Department of Agriculture has jurisdiction over the milk supply as far as adulterations go, and another bureau has supervision over the cold storage of foods. The Department of Agriculture is run in the interest of the farmer and it hardly seems wise to trust the enforcements of measures for the protection of the consumer to the producer and his friends.

The Bureau of Narcotic Drug Control has to do with the illegal use of narcotics, and also maintains clinics where drug addicts may receive treatment. This is also a public health function and its administration should be in the Department of Health.

For political reasons the state maintains a quarantine at the port of entry There is no need for this and this work should be transferred to the federal government without further bickering.

The state intrusts its insane to the care of a commission which is more interested in treatment than in prevention. This should be a function of the Health Department.

Besides the above major "Health Departments" this state maintains a tuberculosis hospital which is administered by a commission, an institute for the study of cancer, administered by a board of trustees, and several other smaller commissions which, although doing good work, are not sufficiently closely related to the administration of the Department of Health to be of the maximum good to the state.

The funds available for public health work are none too plentiful and they should not be squandered in useless overhead charges, nor should the state maintain two offices where one can do the work.

All measures for the prevention of disease or the treatment of disease should be administered by the Department of Health. In addition the governors of the several states should see that there is the proper coöperation between the various bureaus of the state administration so that there will be no duplication.

MEDICAL TREATMENT OF DISABLED SOLDIERS AND SAILORS.

IT may not be known by all who might avail themselves of treatment by the Government, that under Public Act 326 the United States Public Health Service agrees to furnish relief to any honorably discharged soldier, sailor or marine, or Army or Navy nurse, male or female, who was discharged on or after October 6, 1917, and becomes disabled or ill on account of illness or injury incurred previous to discharge from service, and not due to misconduct. Physicians throughout the country should know the Government's position in this matter, as it is stated in a pamphlet recently issued, "Relief to Disabled Men through the United States Public Health Service."

By applying to the Commanding Officer of an Army hospital, those who come under the act may enter the institution; or by applying to a Public Health Service official, they may enter a Public Health Service hospital. In both cases accepted applicants will have all proper expenses paid; but unless authority is obtained from one of these officials, the Government will not pay for medical treatment. Public Health Service hospitals are located in a number of cities throughout the country.

Lieutenant Colonel Mathew C. Smith of the General Staff, who is in charge of the employment and the general welfare of ex-service men, has said:

"Although the welfare bodies and others have been coöperating with the War Department in an effort properly to inform all these persons who are entitled to medical or surgical rights, these men incurred their disabilities while in the service of our country, and it is the intention of the Government that they shall not become wards of the public. The coöperation of all medical men is requested in this matter. Physicians and surgeons are notified that former soldiers or sailors suffering from disabilities resulting from war conditions may be directed to the local Red Cross or United States Public Health Service representative, or to the nearest Army hospital."

If discharge or other papers showing that the disability was existing at the time of separation from service are available, they should be presented by the applicant, as they will be of help in making a dicision on the case. If these pa-

pers are not available, however, the man should not hesitate to apply. Any applicant, if this condition demands it, will be immediately placed under treatment pending the receipt of the necessary papers.

If there is no representative of the Health Service in the man's home town and no Army hospital at hand, and it is possible for him to travel, such traveling expenses, hospital expenses, and wages lost while undergoing examination will be paid by the Government, should it be decided that treatment is necessary. On the other hand, if the physical condition of the man makes it impossible for him to travel, the Public Health Service will arrange for his examination and treatment at his home. In special cases where it is found that a change of climate will be beneficial patients will be sent by the Public Health Service to specially designated hospitals.

Copies of the pamphlet explaining the law may be secured without charge by any physician on application to the office of the Assistant to the Secretary of War, Service and Information Branch, Council of National Defence Building, Washington, D. C.

TRAINING IN HOME NURSING.

THE recent epidemic of influenza has again demonstrated that the nursing service available in most communities is entirely inadequate. Even in the villages there have been thousands of cases of the disease, all in need of nursing care. It is manifest that no community could maintain at all times a sufficient number of professional nurses to meet the demands of a great epidemic.

If we cannot have adequate professional nursing service we must do the next best thing: provide practical training for as many women as possible. The nation is not hesitating to call upon the young men to undergo a period of military training so as to be able to protect the country in case of war. Why not call upon the women to undergo a period of training that will fit them for the duties of home care for the sick? Wars come very infrequently, but the necessity for nursing the sick is always here.

Where shall a woman obtain this instruction? It seems to us that the time has arrived when the system of public instruction must be recognized on a more practical basis in order to equip pupils more thoroughly for their work in the world. When we have such a reorganization, home care of the sick will become a major subject in the course for every girl in the land. This must not be a course learned wholly from books, but must be made practical. We do not expect that every woman will be as efficient as a professional nurse, but it is reasonable to expect that she will know how to take the temperature, observe symptoms, prepare food for the sick, and do many of the small things that go to make up efficient nursing.

The community that had adopted such a program a few years ago would have been in a fortunate position during the great epidemic of 1918 and the lesser epidemic through which we are now passing.

MEDICAL NOTES.

MEMORIAL FOR LORD LISTER.—It has been announced that plans are now being made by the government to establish a memorial to Lord Lister in Edinburgh. It has been decided by the University and the Royal Colleges of Physicians and Surgeons in Edinburgh, under whose control the memorial will be established, to provide an institute for research and teaching in medicine. A site has already been secured and there is being organized a committee, of which Mr. Balfour, chancellor of the university, will be president, to make an appeal to the public for the sum of $1,250,000.

APPOINTMENT OF DR. HUGH S. CUMMINGS.—Dr. Hugh S. Cummings, of Hampton, Virginia, is to succeed Dr. Rupert Blue as surgeon general of the Public Health Service. General Blue has served two terms as surgeon general, being appointed for the first time during the administration of President Taft and later by President Wilson. Dr. Blue will remain in the Public Health Service and will devote himself to research work.

APPROPRIATION FOR THE STUDY OF INFLUENZA.—The sum of five hundred thousand dollars has been appropriated by the U. S. Senate to be used by the Public Health Service in combating influenza. Allotments will be made to universities, colleges, and other research insti-

tutions by the Public Health Service to promote the investigation of influenza and allied diseases in order to discover their causes and prevent their spread.

ELECTION OF PROFESSOR LAFAYETTE B. MENDEL.—The election of Professor Lafayette B. Mendel, of Yale University, as associate member of the Société Royale des Sciences Médicales et Naturelles of Brussels has been announced.

APPOINTMENT OF PROFESSOR SWALE VINCENT.—Professor Swale Vincent has received an appointment as professor of physiology in the University of London (Middlesex Hospital) and will take up his duties in London probably at the beginning of May. Professor Vincent has occupied the chair of physiology at the University of Manitoba (Winnipeg) since 1904.

APPOINTMENT OF DR. HAROLD PRINGLE.—To succeed the late Sir Henry Thompson, Dr. Harold Pringle has been appointed professor of physiology in Trinity College, Dublin. Dr. Pringle was formerly lecturer on histology and assistant in physiology in the University of Edinburgh.

TYPHUS IN RUSSIAN ARMY.—A recent report from Basile Maklakoff, representative of the anti-Bolshevik forces in Paris, discloses the fact that the remaining forces of the army of General Yudenitch are threatened with extermination by typhus. There are left at the present time two thousand officers and eighteen thousand men, and of these there is hardly a man who is not infected with typhus or some other disease.

DANGERS OF BIRTH CONTROL.— In a recent address before the Montreal Catholic Women's League in Montreal, Dr. W. A. L. Styles is reported to have expressed the belief that the American race in the United States is threatened with extinction within the next century and a half if the doctrine of birth control continues in its present ascendency. He stated that the number of American children under the age of five, per thousand women of child-bearing age, in the United States has decreased fifty per cent. in the last century, and that immigration and the birth rate of the foreign population has kept the birth rate higher than the death rate.

TYPHOID IN GALICIA.—The American Red Cross has been asked by the Polish Government to aid in checking the epidemic of typhoid fever, which is spreading throughout Southeastern Galicia, by sending doctors to that district. It is reported that in Eastern Galicia the people are dying out by whole villages, there being several in which there is now no living inhabitant. Since the beginning of the epidemic, there have been one hundred thousand deaths, one-fifth of the number who have been ill with the disease. At Tarnopol there is a daily death roll of one hundred at hospitals, while at Stanislau hospitals are so crowded that many sufferers can be given no attention.

BOSTON AND MASSACHUSETTS.

THE NEW ENGLAND DEACONESS ASSOCIATION.—The Cullis Home in Roxbury has come under the control of the New England Deaconess Association, and will be used exclusively for the care of persons afflicted with cancer and other incurable diseases. The Association hopes eventually to build a large hospital for the treatment of such sufferers. The institution will be the first of its kind in the state under Protestant auspices. At present there are in Boston only twenty-four beds under Protestant management which may be occupied by patients suffering from cancer whose cases are beyond cure, and none of these is for men. There will be no restrictions placed on nationality or religion as a requirement for admission to the home. More than one million dollars will be needed to carry on the work of the institution; it is hoped that this sum will be raised by subscription. The New England Deaconess Hospital in Boston is obliged to refuse admission to approximately two thousand patients annually because of its limited accommodations, and the need for the care of these incurable cases is becoming increasingly great.

INFLUENZA IN BOSTON AND MASSACHUSETTS.—Recent reports from Boston and throughout Massachusetts show a steady decline in the number of new influenza cases. On February 19 there were reported to the State Department of Health 868 cases, including 124 in Boston.

Worcester reported 61 cases; New Bedford, 56; Lowell, 49; Easthampton, 29; Clinton, 28; and Lawrence, 26. On February 20, there were reported only 650 influenza cases in Massachusetts; of these, 74 occurred in Boston, where there were also nine new cases of pneumonia and six deaths. Other cities made the following reports: Lowell, 77; Haverhill, 66; Worcester, 36; Cambridge, 30; Saugus, 30; New Bedford, 29; Fall River, 27.

Reports received for February 21 show a further decrease in the number of cases in Boston, but a slight increase in other parts of the state, the totals being 58 for Boston and 646 for the rest of the Commonwealth. Other reports included: Lowell, 47 cases; Lynn, 40; Worcester, 39; Cambridge, 34; Clinton, 31; Plymouth, 28; Spencer, 26; New Bedford, 25; and Templeton, 25. During the week ending February 21 there was a total number of 760 cases of influenza in Boston, a decrease of 1353 from the number during the preceding week. There were 106 deaths from influenza in Boston, a decrease of 33 from the week before, and there were 110 deaths from pneumonia.

The Massachusetts Medical Society.

COMMITTEE ON PUBLIC HEALTH. PROMOTION OF MASSACHUSETTS CENTRAL HEALTH COUNCIL.

WITH a view to the promotion of public health in the State, the Public Health Committee of the Massachusetts Medical Society extended an invitation to representatives of twenty organizations interested in public health to meet at the Boston Medical Library on May 2, 1919, for the purpose of considering "ways or means whereby those activities in public interest, called into being by the war, may be perpetuated, and a closer relationship be brought about among all agencies, private and public, which exist for the promotion of public welfare in the Commonwealth."

At the meeting on that date, at which eighteen representatives of such organization were present, it was unanimously voted: "That the meeting endorse the idea of a federation of welfare agencies and that the Public Health Committee of the Massachusetts Medical Society take measures to secure the formulation of plans to bring about such a federation."

As a definite step to this end it was voted that a committee of seven be appointed by the Chair to consider the matter and report to the organizations represented at the meeting. The committee appointed consisted of Dr. Walter P. Bowers, chairman; Dr. Eugene R. Kelley, Miss Mary Beard, Mr. Robert V. Spencer, Mr. William A. L. Brazeley, Dr. George W. Kline and Mr. C. C. Carsteins.

From various causes, definite action by this Committee has been delayed, but finally on January 30, 1920, it formulated the specific recommendations which are to be found in substance in the enclosed transcript of the proceedings of the Committee meeting on that date.

It is to be noted among other recommendations the Committee states that: "There should be immediately called into existence a central health council to be composed of the executive heads of all organizations in Massachusetts doing state-wide work which are interested in public health."

For the purpose of giving interested organizations an opportunity to hear the report of this Committee and to organize a central health council or to take any other action which they may deem advisable, the Public Health Committee of the Massachusetts Medical Society has arranged to have placed at the disposal of representatives of interested organizations a room and stenographer at the Medical Library (Sprague Hall) 8 The Fenway, at 3 P.M., on March 18, 1920.

You are therefore requested to see that representatives of organizations with which you are connected or in which you are interested are present at the time and place stated, and it is suggested that such representatives be the chief executive officers and one other representative of your organization, and that they be vested with any necessary authority to take part in the formation of a Central Health Council as recommended.

Yours sincerely,

ANNIE LEE HAMILTON,

Secretary.

MINUTES OF SESSION OF COMMITTEE OF SEVEN ON COÖRDINATION OF PUBLIC HEALTH AGENCIES OF MASSACHUSETTS.

The Committee of Seven appointed by the Committee on Public Health of the Massachusetts Medical Society for the purpose of considering the possibility of bringing about a better coördination, or a federation, of public health agencies of the State, met at the call of the Chairman, Dr. Walter P. Bowers, in Room 143, State House, Friday, January 30, at 11 o'clock. Besides the Chairman, the following gentlemen were present: Drs. Geo. W. Kline, and Eugene R. Kelley, Messrs. C. C. Carsteins, William A. L. Brazeley, and Robert V. Spencer. Mr. Spencer was appointed secretary of the meeting.

After a somewhat extended discussion concerning the history of efforts in other parts of the country for the coördination of public health and welfare agencies and the possibilities for the success of such an effort in the State of Massachusetts, the following report was recommended as representing a unanimous consensus of opinion of those present:

1. There should be immediately called into existence a central health council to be composed of the executive heads of all organizations in Massachusetts doing state-wide work which are interested in public health; the council to be composed of the executive heads of such bodies and one other member from each society. It was suggested that several agencies in addition to those which are invited to participate in the first conference called, including the Massachusetts Dental Society, be invited to representation on the council.

2. Your Committee believes that this council should have for one of its functions joint action regarding health legislation brought forward each year and recommends that the council be formed and sit as soon as possible for the consideration of health legislation which has been introduced for consideration by the present session of our General Court.

3. It also believes that such a council should immediately begin a study of the different successful and unsuccessful attempts at coördination of public health agencies which have been undertaken in other parts of the country and from this study formulate a workable plan for Massachusetts.

4. We further recommend that all state-wide organizations interested in public health be invited to present their programs before this general council in order that any gaps or overlapping in the field of public health work throughout the state may be eliminated.

The Committee, having decided upon the above report, adjourned.

(Signed) ROBERT V. SPENCER,
Secretary of the Meeting.

Approved:

W. P. BOWERS, *Chairman.*

Correspondence.

CONTROL OF NARCOTIC DRUG ADDICTION.

117 West 76th Street, New York, N. Y.

Mr. Editor:

The *Weekly Bulletin* of the New York Department of Health of February seventh gives at length, under the heading "Interesting Decision on Treatment of Drug Addiction," an opinion of the Supreme Judicial Court of Massachusetts Commonwealth *vs.* Noble, 230 Mass. Report 83. The New York Department of Heath is vitally interested in this subject as it is extensively engaged at the present time in the treatment of drug addiction.

Under the narcotic drug law of New York, anyone using opium or its derivatives for a period of 30 days is adjudged to be a "drug addict." All such persons have to be registered with the New York City Department of Health if residing in the City of New York. If the addict cannot register in person by furnishing his photograph and the pedigree required to obtain a card of registration, an exemption must be obtained from the Second Deputy Commissioner of Narcotic Drugs. This exemption holds good for 30 days, when it has to be renewed. It has to be procured by the representative of the addict on the sworn testimony of a physician. This testimony covers matters which would be excluded on the ground of personal privilege in any court of law in New York State. Although the New York Legislature repeatedly refused to incorporate measures of this character in the law as drawn, these results have been achieved, first, by a ruling of the Commission of Narcotic Drugs defining a drug addict as above described, and, second, by an amendment of the Sanitary Code of New York City classifying drug addiction as a "pestilential disease" on the authority of the Corporation Counsel. Registration, it may be stated, applies only to New York City. Nowhere else in the State is drug addiction classified as a pestilential disease.

Inasmuch as the whole "drug problem" or, as it is called by some, the "drug promotion," had its origin in this city, the present situation may be described as one of those instances in which "chickens come home to roost."

The first drug law passed in this State was known as the Boylan Law. This law prohibited the prescribing of opium and its derivatives except for disease, injury, or disability. The first arrest under this law was for prescribing for a drug addict. This case is known as the Hoyt Case. Under the law, the accused would have been convicted but for the fact that it was proved to the satisfaction of the jury by

Dr. Ernest S. Bishop of this city that drug addiction was a disease and as such could be prescribed for legally by any physician. This decision shattered the plans of the drug reformers led by the self-proclaimed "Father of the Drug Laws," Mr. Charles B. Towns of this city, who aimed to reclaim the victims of what was called the "drug habit" by custodial care, either institutional or state.

Although the Harrison Law did not accept this formula, the rulings laid down under it by the Commissioner of Internal Revenue surrounded the prescribing of opium by the physician with so many dangers and restrictions that many physicians refused to prescribe it, not only in cases of addiction, but for any purpose whatever. The results of this action were immediate and disastrous. The mortality from suicide and from withdrawal complications became so great that Internal Revenue Agents all over the country requested, and in many instances urged, physicians to take care of these cases until these rulings could be reversed, as they were in time. The Supreme Court of the United States has decided since then that morphine could only be prescribed in the case of an addict for immediate use and not in any fashion to make the addict "comfortable."

The literal application of these principles of law to the treatment of drug addiction by the Internal Revenue Department led to another period of disaster among the victims of this condition. This was ended, according to the accounts printed in the newspapers, by the pleadings, directly addressed to the government, of innumerable sufferers from chronic and incurable disease, as well as from the aged and incurable victims of drug addiction itself.

The evidence of the State's experts in the Massachusetts case refutes the contention that immediate withdrawal of the drug of addiction may result in death. This fact was attested to by Dr. Alex. Lambert as within his own experience, before the Whitney Investigating Committee in this city. Neither was any consideration given by the State to the fact that the prescribing of narcotic drugs by a physician whose acts may appear to be disreputable is vastly to be preferred to such means of obtaining drugs as it has replaced. A newspaper woman before the New York Legislature testified that during one of the periods when doctors refused to prescribe drugs owing to the raids of the police, she was forced to obtain the needed drug under conditions of vilest degradation in criminal resorts in this city. Among those who heard this testimony were several judges by whom she had been sentenced at various times for drug addiction.

Admitting that the indiscriminate use of narcotic drugs is a great and growing evil, no effort has been made by federal or state governments to place the control of this situation in medical hands except under regulations based upon the theories of the original promoters of drug laws with a view to the exploitation of the victims of drug addiction. These promoters have since been discredited by physicians who fought their later measures and defeated them in the New York Legislature. Nevertheless, they have been succeeded at the present time by political exploiters of the drug habit, acting under rules and regulations laid down under existing laws in utter disregard of the scientific facts underlying the problem of drug addiction.

At the last session of the House of Delegates of the American Medical Association the address of the President of the Association was given over to a plea for the enactment of further repressive measures to control the narcotic drug situation. The coming session of this body at New Orleans should be devoted to an investigation of the whole subject of narcotic drug legislation. This should be independently conceived and fearlessly carried out.

JOHN P. DAVIN, M.D.

THE SCARLET FEVER OUTBREAK.

City Hall, West Newton, Mass.,
February 12, 1920.

Mr. Editor:

In studying the statistics of the recent outbreak of scarlet fever, two groups of cases have been very noticeable: Those who have infected others at varying periods after release, and those who have had suppurating ears or discharging noses, which were very refractory to treatment and prolonged the hospital stay excessively.

Both of these groups are very interesting to the health officer—the first because they are the cause of other cases, thus increasing the number, and require an explanation of why they were released so soon; the second because they require many explanations of why they were not released. Both groups also increase the total cost of an outbreak.

Practically all the patients in these two groups have adenoids or enlarged tonsils, or both, a condition which has been observed in other outbreaks in patients showing a similar history.

The history of the first group is usually as follows: They may, or may not, have had complications during the course of the disease, but, in any event, they were clean at the time of release and had been so for several days previous. After returning home they develop a running nose or ear, sometimes in a few days, sometimes not for a few weeks, and a day or two after the appearance of the nasal or aural discharge another case of scarlet fever develops in the family, the number of new cases being limited by the number of non-immunes.

Two questions arise for solution: How long after apparent recovery are these carrier cases potential sources of infection, and what can be done to prevent them from continuing to be such?

It is known that typhoid carriers are potential sources of infection for long periods after apparent recovery and also that there are periods when they seem to be quiescent, only to become active again from some unknown cause.

It seems fair to infer that a person with adenoids or enlarged tonsils who has had scarlet fever may be a potential source of infection for an indefinite period after apparent recovery: that his adenoids and tonsils act as reservoirs of infection and that it only requires an acute catarrhal inflammation, with its increasing mucous discharge, to wash out the infective material and make him an active source of danger.

This hypothesis—and it is no more—seems to offer a possible explanation of the occurrence of many cases of scarlet fever which cannot be explained in any other way, and it would be of value if health officers would record their experiences with similar cases and notice how many apparent carriers who infect others have adenoids or enlarged tonsils.

The natural corrollary is that a person with adenoids or enlarged tonsils should have them removed before being released after scarlet fever.

In the second group of cases the removal of the adenoids and tonsils seems to offer the best hope of a speedy cure and in the few cases in which this has been done the result seems to justify the operation.

In one instance in which the stay in the hospital had been 127 days a marked diminution of the discharge was noted within three days after the removal of the adenoids, and other cases showed similar improvement.

FRANCIS GEO. CURTIS, M.D., *Chairman*,
Newton Board of Health.

TREATMENT OF INFLUENZA AND PNEUMONIA.

Somerville, Mass., February 21, 1920.

Mr. Editor:

In view of the prevalence of influenza and pneumonia, I feel that a few suggestions, based on our experiences at the Brooks Cubicle Hospital, may be pertinent.

We are all agreed that the moving of pneumonia patients in the latter stages of the disease is a most dangerous thing, especially in extreme cold weather and in bad traveling. If the patient has been sick for over three or four days and there is any opportunity to treat him, leave him where he is and give him what little chance he may have. We have had some very unfortunate experiences in this matter, several of the patients dying within three or four hours of admission and one case sent at night from another town one of the coldest nights of the winter found dead in the ambulance on its arrival at the hospital.

The importance of fresh air cannot be too strongly emphasized during the acute stage of the disease, but equally important is the limiting of the air supply and warming the room just as soon as the patient's temperature has become normal. For this reason I believe that the cubicle hospital should be operated in conjunction with a closed one so that the patient may be taken into the closed hospital for convalescence.

For the protection of patients paper pneumonia jackets, helmets with hoods should come down over the neck and shoulders, paper blankets for lightness and warmth and plenty of hot water bottles in the bed.

We believe that a great deal of harm has been done by too frequent examinations of the chest and the consequent exposure.

The importance of water and forced feeding cannot be too strongly emphasized. Above all, keep the bowels open. So many of these septic cases develop an intestinal paralysis that this is most important. If this condition obtains, we have found great benefits from Fowler's solution gtt. v every three hours (suggestion of Dr. W. A. Brooks) with enemata of milk and molasses.

Too much stress cannot be laid upon the avoidance of all drugs which reduce the temperature and consequently lower the bodily resistance. Small doses (gr. ii) Dover powder will usually make the patient comfortable and control, to some extent, the cough.

We believe that the early use of digitalis and other so-called heart stimulants is a grave mistake because, in the first place, we feel that they do harm, and, more than all, we feel that we should save all of our resources until needed at or near the crisis. In septic cases with streptococcus infection nothing seems to do as much good as strychnia (gr. 1-30) every three hours.

A full report of the work of the Hospital will be given at the end of the season.

We feel that another year we can do even more good by the use of units of skilled nurses who may be sent to different sections of New England to organize and supervise the nursing situation.

THOMAS M. DURELL, M.D., *Chief of Staff.*

APPETITE VERSUS THERAPEUTICS.

Mr. Editor:

It is, to me, regrettable that anyone should hold views such as are recorded in the letter published in your issue of February 19, 1920. To many practitioners of medicine of high clinical attainment, no agent is so valuable as alcohol in the treatment of many threatening acute diseases. To bring scientific teaching in to settle this important queston is not desirable because science apart from bedside experience and observation has in reality slight practical value. Today, more than ever, we need good, thoroughly-trained, all-around physicians. No mere laboratory research or findings can make them, and the one-sided, narrow outlook of the specialist has become deplorable in the highest degree. There are men who have followed science closely in medicine, so far as may be, and hold it compatible with the best care of patients. Beyond a limited degree, its teaching is illusory and vain. Ergo, let us review our knowledge and in doing so correct what is faulty and pernicious.

BEVERLEY ROBINSON, M.D.

ANECDOTES OF BARON LARREY.

Boston, February 18, 1920.

Mr. Editor:

I congratulate the readers of our JOURNAL upon the admirable paper by Dr. Coues giving a sketch of the history of Baron Larrey. The following two items, which come to me from an accredited authority but, so far as I know, have never been published, are of more than usual significance:

A postman handed the Emperor Napoleon a letter just as he and the Empress were driving from the palace. Noticing the postmark of England, unopened, he stamped upon it, showing his intense hatred of its source. Josephine opened it and said, "But see, it is from Jenner. He desires the release of his beloved colonel, who is your prisoner."

"Anything Jenner wants shall be granted. He has been my most faithful assistant in the European campaigns."

From Jenner Larrey had obtained vaccine virus and every French soldier had been protected from smallpox, which had devastated the armies of the Continent.

It is not generally known that Napoleon was an epileptic. He had been under an extraordinary continuous strain in preparation for his last campaign but was confident of the victory of the morrow. He left orders to be called at four in the morning of the battle of Waterloo. That night he was seized with an unusually severe epileptic attack and Baron Larrey allowed him to sleep until six. Who shall say that the destiny of Europe, which hung in the balance was not decided by those fateful two hours?

Permit me to remain,

Yours sincerely,

HENRY O. MARCY.

P. S. I consider my copy of Baron Larrey, published in two volumes, among the more precious books of my library.

NOTICES.

MASSACHUSETTS GENERAL HOSPITAL.—Clinical meeting, Wednesday, March 17, 8.00 P.M., at lower amphitheatre, Out-Patient Department.

Program: Recent Work on the Inorganic Constituents of the Blood, Dr. W. Denis; The Phenolsulphonephthalein Test and the Nitrogen of the Blood in the Diagnosis, Prognosis, and Treatment of Chronic Nephritis, Dr. Reginald Fitz.

Dr. Frederick T. Lord will preside.

Doctors, nurses and medical students cordially invited.

HARVARD MEDICAL SOCIETY.—Next meeting in the Peter Bent Brigham Hospital Amphitheatre, Tuesday evening, March 16.

Program: Demonstration of cases. Dr. W. R. Sisson, The Effect of Feeding the Thymus Gland; Dr. W. G. Penfield, Contraction Waves in the Normal and Hydronephrotic Ureter. Discussion by Drs. Cannon, Quinby, O'Conor, and Wislocki.

Medical students and physicians are cordially invited to attend.

ELLIOTT C. CUTLER, *Secretary.*